

COMDIRAC Interface

*IHEP, Beijing,
13-15 November 2013*



Why another interface

- ▶ The original DIRAC command line interface is following the traditional “edg” style
 - ▶ Long cumbersome names
 - ▶ Non-intuitive semantics
- ▶ The idea of the COMDIRAC command line interface is to provide a set of commands similar to the UNIX ones in a “look-and-feel” for file and job management
 - ▶ *Author Pierre Gay, University of Bordeaux*

- ▶ The COMDIRAC is maintaining user sessions which allows to work with the logical name space of the grid data in a similar way as with the local file system
 - ▶ Memory of the “current directory” in the logical name space
 - ▶ Possibility to define “environment” for the logical name space operations
- ▶ User sees in the same terminal session 2 parallel shells
 - ▶ Standard UNIX shell
 - ▶ COMDIRAC shell with “d”-commands UNIX alternatives

- ▶ Most of the COMDIRAC commands are similar to their UNIX counterparts:
 - ▶ **dls, dcd, dpwd, dmkdir, dchmod, ...**
- ▶ Some commands are specific to the grid data:
 - ▶ **dput, dget, drepl, ...**

- ▶ **dsub** command is similar to the *dirac-wms-job-submit* one:
 - ▶ **dsub user_job.jdl**
- ▶ **dsubmit** is based on semantics of common batch systems:
 - ▶ **dsubmit hello_world.sh**
 - ▶ Job status monitoring with **dstat**
 - ▶ Getting job results with **doutput**
 - ▶ e.g. **doutput -g MandelbrotQuest**

- ▶ The COMDIRAC client commands are available to the CNGRID users out of the box
- ▶ The tutorial students have to update their client installation with doing once again:
 - ▶ **dirac-install -V cngrid**
in the client installation directory
- ▶ The COMDIRAC session is initiated with the **dinit** command
 - ▶ Generates user proxy
 - ▶ Creates minimal necessary environment
 - ▶ Suitable for the tutorial users

- ▶ The COMDIRAC package is a recent addition to the DIRAC Project
 - ▶ Might be unstable in certain aspects ;(
 - ▶ Your feedback is welcome to make it better !

- ▶ A detailed COMDIRAC tutorial is available on the web:
 - ▶ <https://github.com/DIRACGrid/COMDIRAC/wiki>
 - ▶ Examples are given for *vo.france-grilles.fr*, change for *vo.france-asia.org*
- ▶ Use the COMDIRAC interface for the Mandelbrot Quest tasks

- ▶ JDL for bulk job submission with JobGroup defined

```
Executable = "mandelbrot";  
...  
JobGroup = "MyMandelbrotQuest";  
Parameters = 100;  
...
```

- ▶ Submit
 - ▶ **dsub my_mandelbrot.jdl**
- ▶ Get results
 - ▶ **doutput -g MyMandelbrotQuest -D mydir -n -t**
- ▶ Make the movie
 - ▶ **cd mydir**
 - ▶ **convert *.bmp movie.gif**